



EZH2 — 1	MGQTGKKSEKCPVCWRKRVKSEYMLRLQLKFRRADEVKSMFSSNRQKIL	50
	..... . . . . .: .: .: .: . . . .: .	
E(z) — 1	....MNSTKVPPEWKRRVKSEYIKIRQQKRYKRADEIKEAWIRNWDEHN	45
	..... . . .: . . .... .: .: . .: .	
51	ERTEILNQEWKORRIQPVHILTSVSSLRGTRCSVTSSDLDFP..TQVIP	98
	.... . . .: . . .... .: .: . .: .	
46	HNVQDLYCESKVWQAKPYD...PPHVDCVKRAEVTSYNG PSGPQKVPI	91
	..... . . .: . . .... .: .: . .: .	
99	KTLNAVASVPIMYSWSPLOQNFMVEDETVLHNIPYMGDEVLDQGTFIEE	148
	..... . . .: . . .... .: .: . .: .	
92	CVINAVTPITPMYTWAFTQQNFMVEDETVLHNIPYMGDEVLDKGKFIEE	141
	..... . . .: . . .... .: .: . .: .	
149	L KNYDGKVHGDRCGF NDE FVELVNAL.....	178
	:     : .: .: . .: .	
142	L KNYDGKVHCDKDPFSMDDA FVELVHALMRSYSKELEEAAPSTSTAIIK	191
	..... . . .: . . .... .: .: . .: .	
179	.....GQYNDDDDDDDDGDPPE.....EREKQKDLED.....H	206
	.: : . .: . . .... .: .. . .	
192	TEPLAKSKQGEDDGVVVDADCESPMKLEKTESKGDLTDVKEKTEEPVE	241
	..... . . .: . . .... .: .: . .: .	
207	RDDKESRPRK.....FPSDK FEA SSMFPDKGTAELKEKYKELTE	249
	: .: : . .: . . .... .: .: . .: .	
242	TEDADVKPAVEEVKDKLKPFPAT FQA SANFPDKGTAQELKEKYIELTE	291
	..... . . .: . . .... .: .: . .: .	
250	QQLPGALPPE@TPNIDGPNAKSVQREQLHSFHTLF@RRCFKYD@FLHPP	299
	: .: . . .... .: .: . . .... .: .: . . .... .: .	
292	HQDPER.PQE@TPNIDC KAESVSERTMHSHFTLP@RRCFKYD@FLHRL	340
	..... . . .: . . .... .: .: . .: .	
300	.HATPNTYKRKNTEALDNKRCPCQ@QHLEGAKFAAALTAERIKTPP	347
	.. . .: . . .... .: .: . . .... . .	
341	OCHAGPNLQKRRYPELKPF@AEP@NSC@YMLIDGMKEKLAA...DSKTPP	386
	..... . . .: . . .... .: .: . .: .	
348	KRPCGRRRGLPNNSSRPSTPTINVLESKDTDSREACTETGGENNDFEE	397
	..... . . .: . . .... .: .: . .: .	
387	..... DSCNEASSEDSDNSNSQFSNKDFNH	412
	..... .	
398	EEKDET.SSSSEANSRCQTP KMKPN EPPENNEWSGAEASMFRLIGT	446
	.: .: . . . .... .: . . .... .: .: . .: .	
413	ENSKDNLTVNSAAVAEINSIMAGMMNITSTQCV.WTGADQALYRVLHKV	461
	..... .	
447	YYDNRCAIARLICTKT@QVYEFVRKVESSI APAPAEDVD PPRKKKRKH	496
	.. .: . . .... .: .: . . .... .: .: . . .... .: .	
462	YLKNYCAIAHMLTKT@QVYEFQKDEAESFEDLRQDF PPRKKKKKQ	511
	..... . . .: . . .... .: .: . .: .	

FIG. 1A

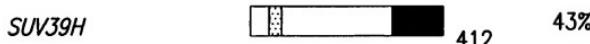
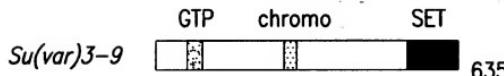


FIG. 2A

SUV39H				
<i>Su(var)3-9</i>	1	MAENLKGCSVCKSSWNLQQLCRLAKLSCPALGISKRNLYD <b>EVEEYLCD</b>	50	
	207	.....MGVIAKRPKG..... <b>EYVVERIEC</b>	226	CHROMO
	51	<b>YKKIREQEYLLVKWKGYPDSESTWEPRQNLK</b> .....	81	39%
	227	<b>VENDQYQPVFVKWLGYHDSENTWESLANVADCAEMKFVERHQQLYET</b> .....	276	
	82	CVRILKQFHDKLERELLRRHHRSKTPRHLDP.SLANYLVQAKORRALRR	130	
	277	<b>IAKITTELEKQLEALPLMENITVAEVDAYEPLNLQIDLILLAQYRAAGSR</b>	326	
	131	WEQE.....LNAKRSHLGR.....	146	
	327	SQREPKQICERALKSMQIKAQFVRKQLADLALFEKRMNHIVEKPSPPIR	376	
	147	<b>VENEVLDLGPPRAFYVINEYRVGEGLTLNQVA.VGCCQDCLWAPTCGGC</b>	195	
	377	VENNIDLDLTDISNFMYIHNDNIGKDVPKPPEAGIVGCCTEDTEECTASTK	426	
	196	PGASL..HKFAYNDCQ.GQVLRLRAGLPYE <b>CNSPCCYDOPNRVVKCGIR</b>	242	
	427	<b>CCARFAGEFLAYERSTRRLRLRPGSAIYE</b> <b>CNSPCCDSSCSNRLVQHGRQ</b>	476	
	243	YDLCIFRTDDGRCNGVRTLÉKTRKNSEVMÉYVGETITSEEAEERRGQIYDR	292	
	477	VPLVLFKTANGSGWGVRATAALRKGEEVCEYIEEITSDEANERGRAYDD	526	
	293	QGATYLFDLDY...VEDYTVDAAYGNISHFVNHSOPNLQVNNVEIDN	339	
	527	NGRTYLFDLDYNTAQDSEYTIDAANYGNISHFVNHSOPNLAVEPCWIEH	576	
	340	LDERLPRIAFFATRTIIRAGEELTFDYNMQDVPDMESTRMDNSFGLAGLP	389	SET
	577	LNVALPHLVFTLRPIKAGEELSFDY.IRADNEDVPYENLSTA.....	618	51%
	390	<b>GSPKKRVRIELCKCGTESCRKYL</b> <b>      :     .        </b>	412	
	619	.....VRVECRCGRDNCRKVLF	635	

FIG. 2B

E(z)	SDIAGWGIFL KEGACKNEFI SEYCGE IISQ DEADRCKVY DK..YMCSFL	50
EZH2	SDVAGWGIFI KDPVQKNEFI SEYCGE IIISQ DEADRCKVY DK..YMCSFL	
HRX	SPIHGRGLFC KRNIADGEVM IEYAGNVIRS IQTDKREKY DSKGIG.CYM	
trx	SHIHGRGLYC TKDIEAGEMV IEYAGELIIRS TUUDKRERYY DSRGIG.CYM	
C26	SRIHGWLGYA MESTIAADEMI VEYIGOTIERS LVAEEERKAY ERRIGCSSYL	
YHR	SAIHNGLYA LSDSIAAKEMI IEYNGERTRO PVAEMREKRY LKNGIGSSYL	
Su3-9	ANGSGWGVRA ATALRKGEFV CEYIEE ITS DEANERGKAY DDNG..RTYL	
SUV39H	DDGRGWGVRT LEKIRKNSFV MEYNGE ITS EEAERRGQIY DRQG..ATYL	
G9a	TAKMGWGVRA LQTIPQGTFI CEYGEUISD AEAD ..V.. RED..DSYL	
KG-1	TQNKGWGIRC LDDIAKGSFV CIYACKILTD DFADKEGL ..EMG..DEYF	

E(z)	FNLN..... NDFVVDATRK GNKIRFAHNS INPNCYAKVM MVTGDH....	100
EZH2	FNLN..... NDFVVDATRK GNKIRFAHNS VNPNCYAKVM MVNGDH....	
HRX	FRID..... DSEVVDATMH GNRARFIINHS CEPNCYSRVI NIDCQK....	
trx	FKID..... DNLVVDATMR GNAARFIINHC CEPNCYSKV DILGHK....	
C26	FRID..... LHHVVDATKR GNFARFIINHS COPNCYAKVL TIEGEK....	
YHR	FRVD..... ENTVIDATKK CGIARFFINHC CDPNCTAKII KVGGRR....	
Su3-9	FDLQDYNTAQD SEYTDAANY GNISHTFHNS CDPNLAVFPC WIEHLNVALP	
SUV39H	FDLQDVE DVYTVDOAAYY GNISHTFHNS CDPNLOVYNV F10NLDERLP	
G9a	FDLDNK..DG EVYCIARYY GNISRFIINL CDPN1IPVRV FMLHQDLRFP	
KG-1	ANLDHI..ES VEYI1DAKLE GNLRGYIINHS CSPNLVQNV FVDTHDLRFP	

E(z)	RIGIFAKRAI QPGEELFFDY ..RYGPTEQL K....FVG  ERMEIIV+ 150	
EZH2	RIGIFAKRAI QTGEELFFDY ..RYSQADAL K....YVG  ERMEIIP+	
HRX	HIVIFAMRKI YRGEELTYDY ..KFPID.A SNKLPNCGA KKCRKFLN+	
trx	HIIIFAVRII VGEELTYDY ..KFPFE.D. .EKIPCSOOS KRCRKYLN+	
C26	RIVIVYNSRITI KKGEELTYDY ..KFPID... DDKIDCLCGA KTCRGYNL+	
YHR	RIVIVYALRDII AASEELTYDY ..KFEREKDD EERLPCLCGA PNCKGFLN+	
Su3-9	HUVFFTLRPII KAGEELLSFDY ..IRADNEVDP YENLSTA.....	
SUV39H	R1AFFAATRTI RAGEELLTFDY NMQVDPVOME STRMDSNFQL AGLPGSPKKR	
G9a	R1AFFISSRDT RTGEELGFDY GDRFW..DIK SKYFTCQCGS EKCKHSAEAI	
KG-1	WMAFFASKRII RAGTELTDWY NYEVG..SVE CKELLCCGA IECR.....	

E(z)	
EZH2	
HRX	
trx	
C26	
YHR	
Su3-9	VRVERCRCGRD NCRKVLF*
SUV39H	VRIECKCGTE SCRKYLF*
G9a	ALEQSRLRL DPHPELLPEL GSLPPVNT*
KG-1	....GRLL*

FIG.5

EZH2 length: 2600bp (coding: 90-2330)

FIG. 6A

1141	GAGGCCGCAAGAAGAGGACGGCTTCCCAATAAACAGTAGCAGGCCAGCACCCCCACCATTA G R R R G R L P N N S S R P S T P T I N	1200
1201	ATGTGCTGGAAATCAAAGGATACAGACAGTCATAGGGAAGCAGGGACTGAACGGGGAG V L E S K D T D S D R E A G T E T G G E	1260
1261	AGAACATAAGAAGAAGAAGAAGAACATGAACTTCGAGCTCCCTGAACAA N N D K E E E E K K D E T S S S E A N	1320
1321	ATTCTCGGTCAACACCATAAAAGATGAAAGCCAATAATGAACTCTCAGAACATGCG S R C Q T P I K M K P N I E P P E N V E	1380
1381	AGTGGACTGCGCTCAAGCCCTAATGTTAACGCTCATGGCACTTACTATGACAATT W S G A E A S M F R Y V L I G T Y Y D N F	1440
1441	TCTGTGCCATTGCTAGGTTAATTGGGACCAAAACATGTAAGCACGGTGTAGGTTAGAG C A I A R L I G T K T C R Q V Y E F R V	1500
1501	TCAAAGAACATGAGCATCATAGCTCCAGCTCCCCGTCAGGATGTCGATACTCTCCAAAGGA K E S S I I A P A P A E D V D T P P R K	1560
1561	AAAAGAAGAGGAAACACCCGTTGTCGGCTGCACACTGCAAGAACATAACCTGAAAGAG K K R K H R L W A A H C R K I Q L K K D	1620
1621	ACGGCTCCTAACCATGTTACAACATATCAACCCGTGATCATCCACGGCACCCCTGTG G S S N H V Y N Y Q P C D H P R Q P C D	1680
1681	ACAGTTGTCGCCATTGCTGATAGCACAAAATTGGTAAAGCTTGTCAATGAGTT S S C P C V I A Q N F C E K F C Q C S S	1740
1741	CAGAGTGTCAAACCCGCTTCCGGATGCCCTGCAGAACACTGCAAACCAAGCAGT E C Q N R F P G C R C K A Q C N T K Q C	1800
1801	GCCCGTGCTACCTGGCTGTCGGAGAGTGTCACCTGACCTCTGTCTTACITGTGGAGCCG P C Y L A V R E C D P D L C L T C G A A A	1860
1861	CTGACCATTCGGACAGTAAAATGTCCTGCAGAACACTGCACTATTCAACGGGGCTCCA D H W D S K N V S C K N C S I Q R G S K	1920
1921	AAAAGCATCTATTGCTGGCACCATCTGACCTGGCAGGCTGGGGATTTTATCAAAGATC K H L L L A P S D V A G W G I F I K D P	1980
1981	CTGTGCGAAAAATGAATTCTCAGAACACTGTCGGAGAGATTATTCTCAAGATGAAG V Q K N E F I S E Y C G E I I S Q D E A	2040
2041	CTGACAGAACAGGAAAGTATGATAAAATACATGTCACCTTCTTCAACTTGAACA D R R G K V Y D K Y M C S F L F N L N N	2100
2101	ATGATTTGCTGGATGCCAACCGCAAGGTAACAAAATCGTTTGCAATCATCGG D F V V D A T R K G N K I R F A N H S V	2160
2161	TAAATCCAACTGCTATGCCAAAGTTATGATGCTAACGGTACAGGATAGGTATT N P N C Y A K V M M V N G D H R I G I F	2220
2221	TGCGCAAGAGAGCCATCCAGACTGGCCAAGACCTGTTTGATACAGATACAGCCAGG A K R A I Q T G E E L F F D Y R Y S Q A	2280

FIG. 6B

REPLACEMENT SHEET

SUV39H length: 2732bp (coding: 45-1284)

1	TCGGAGGGCGGCTAGGCCGAATGCGT	TAGCCGTGGGAAAGATGGCGAAAATTAA	M A E N L K	60
61	AAGGCTGCAGCGTGTGTTCCAAGTCTCTTGAATCAGCTGCAGGACCTGTCCCCCTGG	G C S V C C K S S W N Q L Q D L C R L A		120
121	CCAAGCTCTCTGCCCTGCCCTGGTATCTCAAGAGGAACCTCATGACTTGAAGTCG	K L S C P A L G I S K R N L Y D F E V E		180
181	AGTACCTGTGGATTACAAGAAGATCCGGAAACAGGAATTACCTGGTCAAATGGCTG	Y L C D Y K K I R E Q E Y Y L V K W R G		240
241	GATATCCAGACTCAGAGACCACCTGGGAGGCCACGGCAGAACTCAAGTGCTGCCATATCC	Y P D S E S T W E P R Q N L K C V R I L		300
301	TCAAGCAGTCCCACAAGGACTTAGAAAGGACCTGGCTCCGGGGCACCACCGGTCAAAGA	K Q F H K D L E R E L L R R H H R S K T		360
361	CCCCCCGGCACCTGGACCCAAGCTTGGCCAACCTACCTGGTGCAGAACGGCAAGCAGAGGC	P R H L D P S L A N Y L V Q K A K Q R R		420
421	GGGCCCTCCCTGGCTGGGAGCAGGAGCTCAATGCCAACGGCAGGGCATCTGGGACCCATCA	A L R R W E Q E L N A K R S H L G R I T		480
481	CTGTAGAGAAATGAGGTGGACCTGGACGGCCCTCCCGGGCCCTCGTGTACATCAATGAGT	V E N E V D L D G P P R A F V Y I N E Y		540
541	ACCGTGTGCTGAGGGCATCACCTCAACCCAGCTGGCTGTCGGCTGCCAGTGGCAGGACT	R V G E G I T L N Q V A V G C E C Q D C		600
601	GTCTGTGGCACCCACTGGAGGCTGCTGCCCTGGGGGGCCCTACTGCACAAAGTTGCCCTACA	L W A P T G G C C P G A S L H K F A Y N		660
661	ATGACCAGGGCCAGGTGGCGCTTCAGGCCGCTCCAGGGCTGCCATCTACCGAGTGCACACTCCCCT	D Q G Q V R L R A G L P I Y E C N S R C		720
721	GCGGCTGGGCTATGACTGCCAACATCGTGTGGTACAGAACGGTATCCGATATGACCTCT	R C G Y D C P N R V V Q K G I R Y D L C		780
781	GCATCTCCGGACCCATGAGGGCTGCCCTGGGCTGCCCTGGGGCTCCGACCCCTGGAGAACATTCCCA	I F R T D D G R G W G V R T L E K I R K		840
841	AGAACAGCTTCGTCATGGAGTACCTGGAGAGAGATCATTACCTCACAGGGAGCCAGGGC	N S F V M E Y V G E I I T S E E A E R R		900
901	GGGGCCAGATCTACGACCCCTAGGGGCCACCTACCTCTTGCACCTGGACTACCTGGAGG	G Q I Y D R Q G A T Y L F D L D Y V E D		960
961	ACGTGTACACCGTGGATGCCCTACTATGGCAACATCTCCACATTGTCAAACCAAGCT	V Y T V D A A Y Y G N I S H F V N H S C		1020
1021	GTGACCCCAACCTGGAGCTACAAACGCTTCAATGACAACCTTGCACAGGGCTGCC	D P N L Q V Y N V F I D N L D E R L P R		1080
1081	GCATCGCTTCTTGGCACAAAGAACCTCGGGCAGGGCAGGGCTCACCTTGTACATTACA	I A F F A T R T I R A G E E L T F D Y N		1140

FIG. 7A